

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001209**Date Inspected:** 09-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Shen Xu Jun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item Description	WBS	Dwg No.	Status
1 ZPMC UT re-examinations OBG Deck Mock-up			
The QA inspector witnessed the ultrasonic testing re-evaluation on the partial penetration weld joints (PJP) at the weld # 10. The QA inspector recorded these areas with lack of penetration (LOP) and these areas were not identified by ZPMC's UT testing.			
ZPMC and ABF agreed with the Lack of penetration recorded by the QA inspector.			
Indication # 1 located at approximately Y location 550, The QA inspector recorded LOP 2.81 mm and ZPMC found 2.74 mm.			
Indication # 2 Located at approximately Y location 5890, the QA inspector recorded LOP 2.72 mm, ZPMC found 2.73 mm.			
The QA inspector asked Mr. Warren Buehler which was ABF resolution regarding the two rejectable indications found by the QA inspectors on 12/18/07 and 01/03/08 that ZPMC could not rejected with their equipment( differences of 6 and 7 decibels between ZPMC with ABF and Caltrans representatives). Mr. Warren Buehler said that he had informed his superiors and that he did not know. He added that he was going to ask again.			
2 Floor beam ZPMC UT verifications			

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The QA inspector witnessed the ZPMC technician Ms. E Shuiquin performing ultrasonic testing (UT) verification at the termination of the floor beam connections weld joint # FB-008-02-043 and FB-001-02-045. The QA inspector observed that ZPMC UT verifications appeared to be in general compliance with the contract documents.

3 Macroetch Test Samples for the OBG Deck Mock-up.

The QA inspector re-marked the test samples at the junction of U-ribs to diaphragm on the OBG Deck Mock-up. The QA inspector marked the test samples perpendicular to the ribs. The QA inspector observed ZPMC performing cutting operations on the macroetch test samples with the oxyfuel cutting process at the junction of diaphragm weld connections on this date. The QA inspector had a conversation with Caltrans representative John Tracy. Mr. John Tracy informed that ZPMC completed cutting the test samples at the end of the shift.

4 Unqualified Tack welders

The QA inspector had a conversation with the ZPMC representative Shen Xue Jun. Mr. Shen Xue Jun said that ZPMC was going to perform magnetic particle testing (MT) after ZPMC removed tack welds at the non seismic performance critical member at the weld joint # FB-008-06-006. The QA inspector asked ZPMC why they removed the tack welds. Mr. Shen Xue Jun informed that ZPMC QC in night shift found that the tack welders were not qualified and ZPMC directed production personnel to remove the tack welds. The QA inspector witnessed MT testing of Cai Xin Xin at the areas removed by grinding. The QA inspector found that ZPMC verifications appeared to be in compliance with the contract documents.

### Summary of Conversations:

As noted above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Acuna, Alfredo	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer

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